

# American Marten Surveys in Northern Wisconsin 2005

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## **Abstract**

A total of 19 American marten were detected along 144.3 miles of survey in the Nicolet National Forest. No track surveys were conducted in the Chequamegon Forest this year. Detection rate for marten in 81.2 miles in the Marten Restoration Area of the Nicolet, was 19.7 per 100 miles. Additional research and monitoring on marten was done by several agencies.

## **Introduction**

American marten (*Martes americana*) were listed as a state endangered species in Wisconsin in 1972. Between 1975-1983, 172 marten were released into the northern Nicolet National Forest in northeast Wisconsin. Between 1987-1990, 139 marten were released into the Chequamegon National Forest in northwest Wisconsin. Marten were released into Fisher Management Units that have since been designated as Marten Restoration Areas (MRA). Terrestrial trapping for furbearers is prohibited in these areas, thus they serve as refuge areas for marten and other furbearers. The Nicolet unit is 188 square miles and the Chequamegon Unit is 344 square miles.

Standardized survey routes were established in the Nicolet unit in 1987, and in the Chequamegon in 1991 (Jim Ashbrenner 1994). Periodically other survey routes were examined in or near these Marten Restoration Areas (MRA). The current report includes results for marten surveys in winter 2004-2005.

## **Methods**

Three routes of about 25 to 30 miles each were established in the 2 MRA's (Figure 1 & 2). Two additional routes were also established outside the MRA in the Nicolet. None of the routes in the Chequamegon were run in winter 2004-2005 due to weather limitations and logistical problems. Routes were followed slowly with four-wheel drive vehicle one day after a fresh snowfall (Ashbrenner 1984). Tracks of individual martens, other carnivores, and porcupines were recorded along each survey route.

## **Results and Discussion**

Nineteen marten were detected along 144.3 miles surveyed in the Nicolet National Forest (Table 1). A total of 16 marten were detected along 3 routes in the MRA, covering 81.2 miles, or a rate of 19.7 marten per 100 miles. Detection rates along the 63.1 miles driven outside the MRA was 4.8 per 100 miles, but actually marten were detected only on a 6.7 mile route, that was located directly north of the MRA. Within the MRA, marten rate of detection was slightly less than 2003-2004 (24.7 / 100 miles), but close to the long-term average. Ratio of fisher detection to marten was 2.9: 1 in the MRA. Rate for coyote, bobcat, and wolf detection in the Nicolet were the highest recorded in recent years, but wolf occurrence in this area is still much lower than northwest Wisconsin.

No surveys were conducted in the Chequamegon National Forest. Data from previous years are shown in table 2.

Ongoing research on martens continued to be done by the Great Lakes Indian Fish and Wildlife Commission, and the Forest Service on marten ecology in portions of the MRA in the Chequamegon National Forest (Gilbert et al. 2003). Additionally in winter 2004-2005, GLIFWC, USFS, and DNR cooperated in a marten hair snare study to test for marten presence with DNA across extensive areas of the Great Divide District of the Chequamegon, and northern and central portions of the Nicolet. Along 11 transects sampled, DNA of marten was found along all the routes. This technique has promise of being able to better determine distribution of martens in the state. Results of the marten hair snare study will be reported elsewhere.

DNR and University of Wisconsin-Stevens Point also cooperated on a research project on marten in northeast Wisconsin, including live-capture, radio tracking, and assessment of dispersal habitat. In fall 2004, 17 martens were captured 40 times, and 11 were fitted with radio collars. Details of the research were reported elsewhere (Woodford et al 2005).

### **Acknowledgments**

Track surveys in northeast Wisconsin were conducted by Pat Coffen, Bob Dall, and Amber Roth.

### **Literature Cited**

Ashbrenner, J.E. 1994. Distribution of martens in the Nicolet National Forest, 1994. Wisconsin Wildlife Surveys. 4(1): 96-102

Gilbert, J., P. Zollner, J. Wright, and R. Parisien 2003. Investigating factors limiting dispersal success by Waabizheshi (American Marten) in Wisconsin, Progress Report 2002-2003. Unpublished progress report, GLIFWC Odenah, WI 27pp.

Woodford, J., B. Kohn, K. Russell, Christina Thomas, Tim White and Adrian Wydeven. 2005. Inventory, status, and management needs of American marten in Wisconsin. Summary Report for State Wildlife Grants, Wisconsin Department of Natural Resources, Rhinelander, WI 10 pp.

**Table 1.** *Mammal track observations along marten survey routes in the Nicolet National Forest, winter 2004-2005.*

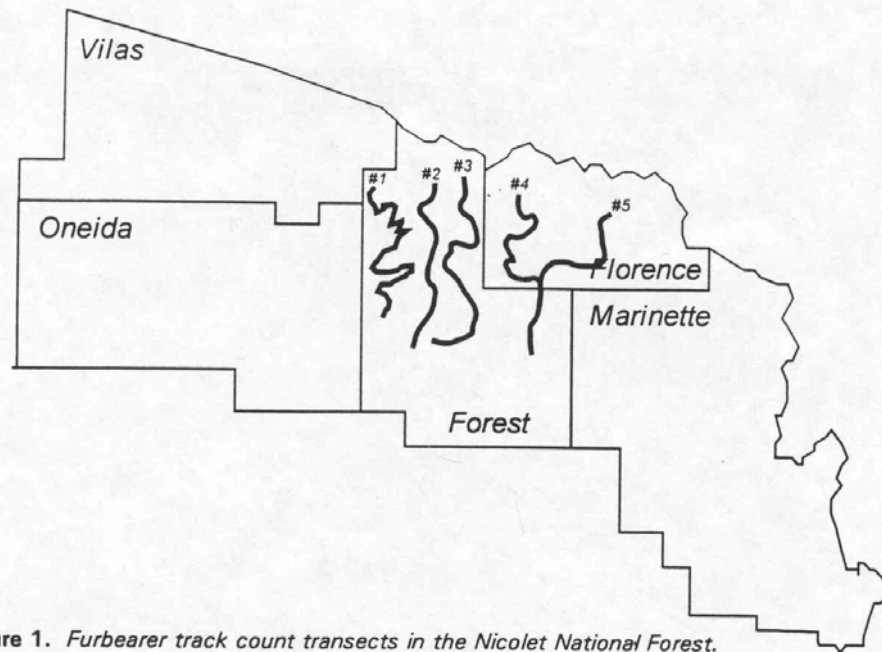
Date	Route No.	Snow Depth (in)	Miles Run	Number of Tracks Observed				
				Marten	Fisher	Coyote	Bobcat	Other
02/09/05	1	15"	29.7	9	24	33	6	7 Otter 3 Dog 5 Fox 2 Wolf 3 Porcupine 2 Raccoon
12/28/04	2	11"	22.8	5	9	12	1	2 Mink 2 Otter 5 Weasel 1 Dog 2 Wolf 2 Porcupine
01/07/05	3	9"	28.7	2	13	22	3	2 Mink 2 Otter 1 Dog 2 Fox
02/15/05	4	13"	28.6	0	12	18	0	1 Bear 1 Porcupine 1 Raccoon
03/02/05	5	17"	15.5	0	5	12	1	2 Dog 1 Porcupine
03/08/05	6A	18"	2.5	0	2	3	0	1 Weasel
03/08/05	6B	18"	6.7	3	5	5	0	1 Mink
03/08/05	7A	19"	9.8	0	9	7	1	1 Otter 2 Porcupine
<b>Totals</b>			<b>144.3</b>	<b>19</b>	<b>79</b>	<b>112</b>	<b>12</b>	<b>5 Mink 12 Otter 6 Weasel 7 Dog 7 Fox 4 Wolf 1 Bear 9 Porcupine 3 Raccoon</b>
Rate per 100 mi (1-3)			(81.2)	19.7	56.7	82.5	12.3	4.9 Mink 13.5 Otter 6.2 Weasel 6.2 Dog 8.6 Fox 4.9 Wolf 6.2 Porcupine 2.5 Raccoon

**Table 1. Continued.**

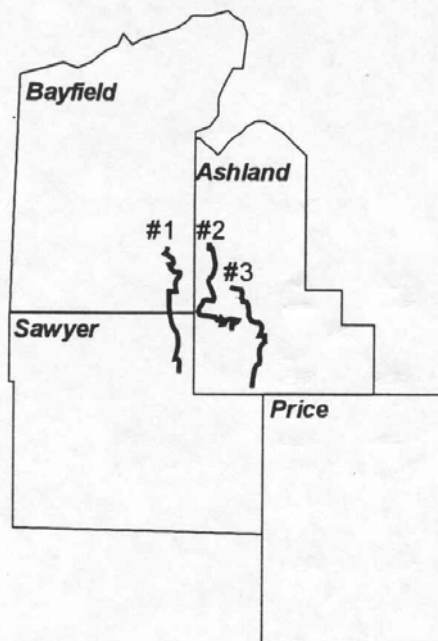
<b>Date</b>	<b>Miles Run</b>	<b>Number of Tracks Observed</b>				
		<b>Marten</b>	<b>Fisher</b>	<b>Coyote</b>	<b>Bobcat</b>	<b>Other</b>
2003- 2004	(81.1)	24.7	45.6	49.3	8.6	4.9 Otter 12.3 Dog 2.5 Fox 2.5 Porcupine 1.2 Raccoon
2002- 2003	(79.5)	11.3	71.7	65.4	7.5	5.0 Otter 1.3 Dog 7.5 Fox 2.5 Wolf 2.5 Porcupine
2001- 2002	(123.4)	11.3	51.9	77.0	12.2	2.4 Otter 3.2 Dog 10.5 Fox 4.9 Porcupine
2000- 2001	(79.1)	25.3	58.2	49.3	8.8	1.3 Otter 7.6 Fox 3.8 Porcupine
1999- 2000	(80.9)	12.4	23.5	32.1	2.5	4.9 Otter 1.2 Dog 3.7 Fox 3.7 Porcupine
1998- 1999	(79.4)	23.9	27.7	27.7	5.0	6.3 Otter 3.8 Fox
1997- 1998	(84.1)	11.9	26.2	41.6	2.4	3.6 Otter 2.4 Fox 3.6 Porcupine
1996- 1997	(76.2)	13.8	37.9	36.8	5.7	2.3 Otter 4.6 Fox 2.3 Porcupine

**Table 2.** *Mammal track observations along marten survey routes near Clam Lake in the Chequamegon National Forest, winter 1996-2005.*

Winter	Routes	Miles Run	Marten	Fisher	Rate per 100 mi.		Other
					Coyote	Bobcat	
2004-2005	None						
2003-2004	1-2	51.2	13.7	43.0	21.5	7.8	9.8 Otter 33.2 Fox 17.6 Wolf 3.9 Porcupine
2002-2003	1	59.7	1.7	13.4	16.8	5.0	13.4 Otter 6.7 Fox 3.4 Wolf 1.7 Porcupine
2001-2002	2-3	45.2	11.1	48.7	13.3	11.1	2.2 Dog 35.4 Fox 28.8 Wolf 2.2 Porcupine
2000-2001	1 & 3	94.4	19.1 (10.2)	59.6	11.7	6.4	6.4 Mink 1.1 Badger 8.5 Otter 19.1 Fox 21.3 Wolf 1.1 Porcupine
1999-2000	1-3	58.3	20.6	70.3	41.2	12.0	3.4 Mink 18.9 Otter 5.1 Dog 22.3 Fox 8.6 Wolf 3.4 Porcupine
1998-1999	None						
1997-1998	1-3	72.6	9.7	41.4	17.2	1.4	2.8 Dog 30.4 Fox 9.7 Wolf 1.4 Porcupine
1996-1997	1-3	76.2	17.1	56.4	10.5	2.6	1.4 Otter 23.2 Fox 7.1 Wolf 2.8 Porcupine



**Figure 1.** *Furbearer track count transects in the Nicolet National Forest.*



**Figure 2.** *Furbearer track count transects in the Chequamegon National Forest.*